

ABSTRACT

A photocatalyst produced from an easily available, relatively low-cost silicon oxide material is disclosed which is capable of decomposing environmental pollutants with improved efficiency. The photocatalyst is produced by pulverizing an artificial crystal, specifically machining waste thereof, into powder particles having a particle diameter of not more than 3.0 μm and then immersing the particles into a solution containing a hydrogen fluoride for activation. Environmental pollutants such as nitrogen oxides (NO_x) and harmful organic compounds can be efficiently decomposed by coming into contact with this photocatalyst while being irradiated with activation light under oxidizing conditions.